

Response to Comments on the Draft NPDES Permit for the Town of Harrah Wastewater Treatment Plant (WWTP)

**EPA Region 10
July 28, 2006
NPDES Permit #WA-002270-5**

Background

On June 26, 2006, EPA issued a public notice of the availability of a draft NPDES permit for the Town of Harrah. This is an existing publicly owned treatment works (POTW).

Response to Public Comments on the Draft NPDES Permit

EPA received comments on the draft NPDES Permit from the Yakama Nation Environmental Protection Program and from the Town of Harrah.

Comment #1

The Yakama Nation Environmental Protection Program expressed concerns about potential deleterious effects of nutrients in the discharge, specifically phosphorus, ammonia, and nitrate-nitrite. The Nation noted the occurrence of nuisance aquatic growths in the Harrah Drain downstream of the discharge and high concentrations of nutrients measured in the Harrah drain near the discharge.

Response #1

Currently, there are insufficient effluent and receiving water data available to determine if the nutrients in the discharge from the Town of Harrah WWTP have the reasonable potential to cause or contribute to excursions above water quality standards. The draft permit proposed quarterly effluent monitoring for ammonia and annual effluent monitoring for total phosphorus and orthophosphate. The draft permit also proposed twice-per-year monitoring of the Harrah Drain for ammonia, total phosphorus and orthophosphate.

In order to better address the Nation's concerns about nutrients, EPA has added requirements for twice-per-year monitoring of nitrate-nitrite in the effluent and the receiving water, increased the effluent monitoring frequency for total phosphorus and orthophosphate to once every six months, and added requirements for twice-per-year monitoring of dissolved oxygen in the receiving water. This monitoring regime will better characterize the discharge of nutrients and their effects on the receiving water. If the data collected as required by the permit shows that the discharge has the reasonable potential to cause or contribute to excursions above water quality standards for nutrients or related parameters such as pH and dissolved oxygen, the next reissuance of this permit will include water quality-based effluent limits for nutrients.

Revisions to the Permit

EPA has added requirements for twice-per-year monitoring of nitrate-nitrite in the effluent and the receiving water, increased the effluent monitoring frequency for total phosphorus and orthophosphate to once every six months, and added requirements for twice-per-year monitoring of dissolved oxygen in the receiving water.

Comment #2

The Yakama Nation Environmental Protection Program requested that the permit address potential overloading of the treatment plant during wet weather events.

Response #2

The application for renewal of this NPDES permit states that the collection system is a separate sanitary sewer, meaning that stormwater is not sent to the treatment plant directly through the collection system. Increased flows to the treatment plant may still be experienced during wet weather events due to inflow and infiltration.

The permit contains a boilerplate condition that any overflow prior to the treatment works be reported to EPA within 24 hours. The permit also contains average monthly and average weekly effluent limitations for the effluent flow rate, and all mass limits in the permit are based on the design flow rate of 55,000 gallons per day. If there are deficiencies in the collection system that cause excessive inflow and infiltration, these conditions will force the permittee to address these deficiencies in order to avoid noncompliance with the permit.

Revisions to the Permit

None.

Comment #3

The Yakama Nation Environmental Protection Program commented that, while Washington State's water quality standards must be used for permitting purposes, the Yakama Nation's standards should be taken into consideration.

Response #3

Because the Yakama Nation's water quality standards have not been approved by EPA, they cannot be used for Clean Water Act purposes, including NPDES permits. As stated in the Fact Sheet, EPA has applied the *Water Quality Standards for Surface Waters of the State of Washington*, based 40 CFR 122.4(d). Because the Harrah Drain is not specifically classified in the Washington standards, EPA has invoked the "general classifications" provision in those standards, which classifies all unclassified surface waters as Class A. As stated in the Washington standards, characteristic uses of Class A waters include domestic, industrial, and agricultural water supply; stock watering; migration, rearing, spawning and harvesting of salmonids and other fish; wildlife habitat; primary contact recreation, and commerce and navigation.

The Yakama Nation's water quality standards classify the Harrah Drain as a Class III waterbody. Class III waterbodies are designated for cultural and religious uses; anadromous and resident fish migration, spawning, and rearing; support of aquatic life; wildlife habitat; recreation; ground water recharge; agricultural water supply; livestock watering; and industrial water supply. EPA believes that water quality appropriate for domestic water supply, primary contact recreation, and the migration, rearing, spawning, and harvesting of fish will also be appropriate for cultural and religious uses and groundwater recharge. As such, the Washington and Yakama Nation standards are very similar, with respect to the beneficial uses for which the Harrah Drain is protected. EPA believes the use of the Washington standards in this manner will provide adequate protection for the beneficial uses of the Harrah Drain.

Revisions to the Permit

None.

Comment #4

The Town of Harrah commented that the draft permit proposed a TSS limit significantly more stringent than the current limits. Based on the information in the fact sheet, the Alternative State Requirement (ASR) allows for “treatment equivalent to secondary” effluent limits for some facilities such as waste stabilization ponds, and that the average monthly TSS limit for such ASR facilities within Washington State is 75 mg/L. This value corresponds to the Town’s current average monthly TSS effluent limit.

The draft documents propose an average monthly TSS effluent limit of 56 mg/L, a reduction of 25.3 percent from the current limit. The justification for this proposed more-stringent limit is that Harrah’s effluent for the period of January 2000 through March 2006 meets this value 90 percent of the time. Assuming future effluent quality remains fairly constant with past effluent quality, this more stringent limit would mean the Town would violate its TSS effluent limit 10 percent of the time, and thus would be subject to enforcement by EPA, the Yakama Nation Environmental Protection Program, and by lawsuits from private citizens.

Consistent compliance with this proposed TSS effluent limit may require expensive treatment plant modification and/or significant changes in treatment facility operation and maintenance. The Town believes the TSS effluent limit in the new permit should remain as 75 mg/L but that if more stringent limits must be imposed, they should be phased on over a five-year period to allow the town to investigate treatment facility modifications and/or operation and maintenance changes that would allow for consistent compliance with the more stringent limit.

The Town is also concerned about the methodology used in arriving at the proposed TSS limit. Will a similar methodology be used to arrive at TSS effluent limits in future permits? For example, if the Town is able to consistently achieve a TSS effluent quality of 56 mg/L over the next five years, will the TSS effluent requirement in the next permit again be reduced using the 90th percentile of past effluent achieved, resulting in a limit of 50 mg/L? This would again require the Town to investigate treatment facility modifications and/or operation and maintenance changes to achieve consistent compliance.

Response #4

As stated in the fact sheet, there are several possible technology-based TSS limits for publicly owned treatment works. The possible effluent limits are as follows:

Table R4.1 – Technology-based Effluent Limits for TSS for Publicly Owned Treatment Works			
Basis	Regulatory Citation	Average Monthly Limit	Average Weekly Limit
Secondary Treatment	40 CFR 133.102	30 mg/L	45 mg/L
Treatment Equivalent to Secondary Treatment	40 CFR 133.101(g) and 133.105(b)	45 mg/L	65 mg/L
“Special Considerations” for waste stabilization ponds (case-specific)	40 CFR 133.103(c)	56 mg/L	84 mg/L
“Alternative State Requirements” for the State of Washington	40 CFR 133.105(d)	75 mg/L	113 mg/L

As stated in the fact sheet, EPA has determined that the facility is eligible for “treatment equivalent to secondary” limits, so effluent limits for TSS can be less stringent than the “secondary treatment” limits.

TSS effluent limits may be made even less stringent than the “treatment equivalent to secondary” limits on the basis of either 40 CFR 133.103(c) (special considerations for waste stabilization ponds) or 40 CFR 133.105(d) (alternative State requirements for the State of Washington or ASR). As stated in the fact sheet, in this case, limits established on the basis of 40 CFR 133.103(c) and using the Yakama Reservation as the “contiguous geographical area” are more stringent than those established under 40 CFR 133.105(d). The “special considerations” limits were used in the draft permit. However, EPA believes that the technical analysis supporting Washington’s EPA approved ASR TSS effluent limitation of 75 mg/L (average weekly) is no less valid on the Yakama reservation than it is elsewhere in the State of Washington, so EPA agrees with the Town that the ASR could be a basis for the TSS limits.

However, 40 CFR 133.105(f) requires permitting authorities to establish effluent limitations more stringent than treatment equivalent to secondary, special considerations for waste stabilization ponds, or ASRs, if the permitting authority determines that the 30-day average and 7-day average BOD and TSS effluent values that could be achievable through proper operation and maintenance of the treatment works, based on an analysis of the past performance of the treatment works, would enable the treatment works to achieve more stringent limitations.

EPA has performed this analysis for the Harrah wastewater treatment plant and determined that the 30-day average and 7-day average TSS concentrations that could be achievable through proper operation and maintenance of the treatment works are less than the maximum concentrations allowed under the ASR. EPA has determined that the Town of Harrah WWTP can achieve average monthly and average weekly TSS limits of 70 and 92 mg/L, respectively, with 99% confidence. Because these effluent concentrations are lower than the ASR limits, these concentrations will be the new effluent limits, based on 40 CFR 133.105(f).

It is not possible for EPA to speculate on precisely what TSS effluent limits may be required in future permits. When the permit is reissued, TSS effluent limits will be the more stringent of technology-based effluent limits based on the “secondary treatment” requirements of the Clean Water Act and its implementing regulations or water quality-based effluent limits established pursuant to Section 301(b)(1)(C) of the Act.

The permittee requests a schedule of compliance. While 40 CFR 122.47 allows for schedules of compliance, when appropriate, it also states, in 122.47(a)(1), that “any schedules of compliance shall require compliance as soon as possible, *but not later than the applicable statutory deadline under the CWA*” (emphasis added). Because the July 1st, 1977 statutory deadline for secondary treatment has passed, no compliance schedule can be allowed to meet effluent limits established pursuant to the “secondary treatment” requirements of the Clean Water Act and the regulations that implement these requirements. As stated above, the final effluent limits are achievable by the Harrah facility with 99% confidence. Therefore, even if a schedule of compliance could be authorized, it would not be necessary.

Revisions to the Permit

Effluent limits for TSS have been changed to average monthly limits of 70 mg/L and 32 lb/day and average weekly limits of 92 mg/L and 42 lb/day.

Comment #5

The Town of Harrah commented that the short time (within 180 days of the effective date of the permit) allowed for the development and implementation of an Operation and Maintenance Plan gives the town insufficient time to budget for the Plan. The Town requests that the time allowed for the development and implementation of an Operation and Maintenance Plan be changed to within one year (365 days) of the effective date of the final permit.

Response #5

EPA believes it is reasonable to allow more time for the Town to complete the Operation and Maintenance Plan.

Revisions to the Permit

The final permit requires that the plan be developed and implemented within one year of the effective date of the final permit, as requested.

Comment #6

The Town of Harrah commented that the column labeled “Maximum ML” in Table 2 of the draft permit is confusing. The heading would imply that we are to use a maximum minimum level. Are the values within this column the minimum reporting levels for the specified parameters? The Town requested clarification of this column.

Response #6

The term “minimum level” is defined in Part VI of the permit as “the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes and processing steps have been followed.” As such, it is similar to a quantification limit or reporting limit. The values in Table 2 are the maximum allowed analytical quantification or reporting limits allowed for the required monitoring. When analyzing samples collected in compliance with the surface water monitoring requirements of the permit, the permittee must use analytical methods that can achieve “minimum levels” (or quantification or reporting limits) that are less than or equal to the values in column labeled “Maximum ML.” The intent of this column in Table 2 is to require the permittee to use analytical methods which are sensitive enough to provide EPA with robust data, which will be used to determine if the authorized discharge has the reasonable potential to cause or contribute to water quality standards violations for phosphorus, ammonia, and nitrate-nitrite.

Revisions to the Permit

None.

Comment #7

The Town of Harrah had two minor editorial comments on the draft permit. The town pointed out that the units on the interim total residual chlorine effluent limits were incorrect. The unit for concentration should have been milligrams per liter (mg/L), not micrograms per liter (µg/L). The interim total residual chlorine limits are an average monthly limit of 0.5 mg/L (or 500 µg/L) and an average weekly limit of 0.75 mg/L (750 µg/L).

The Town also pointed out that the word “selenium” in the Total Residual Chlorine Schedule of Compliance, on Page 9 of the draft permit, should be changed to the phrase “total residual chlorine.”

Response #7

EPA agrees with these editorial comments and regrets any confusion caused by these errors.

Revisions to the Permit

The units on the interim total residual chlorine limits have been corrected, and the word “selenium” in the Total Residual Chlorine Schedule of Compliance, on Page 9 of the draft permit, has been changed to the phrase “total residual chlorine.”

Other Revisions to the Draft NPDES Permit

EPA determined that the latitude and longitude of the outfall, as reported on the 1998 questionnaire and on the cover page of the draft permit, was incorrect. EPA has determined that the correct outfall coordinates are 46° 24' 17" N latitude and 120° 33' 36" W longitude. The corrected latitude and longitude are used in the final permit.